

**REMARKS**

Claims 1-13, 17-18, 20-35 and 38-39 are pending in the present application. In the Office Action mailed March 29, 2006, the Examiner rejected claims 21, 29 and 31 under 35 U.S.C. §102(e) as being anticipated by Wan et al. (USP 6,984,978). The Examiner next rejected claims 22-23 under 35 U.S.C. §103(a) as being unpatentable over Wan et al.

Claims 1-13, 17, 18, 20, 24-28, 32-35, 38 and 39 are withdrawn from consideration.

The Examiner objected to the Title of the invention as not descriptive. An amended title is presented herein above.

The Abstract is objected to because legal phraseology such as “the present invention” is used. An amended abstract is presented herein above.

Claims 21-23 and 29-31 are objected to because of informalities.

The Examiner objected to claim 21 on the grounds that it is unclear what “a spiral portion” refers to. The spiral portion referenced in claim 21 is shown in Fig. 5, where a pair of spiraled conductive coils 130, 132, are shown in cross section.

As to the Examiner’s objection to claim 30 and its disclosure of “an input terminal” and “an output terminal”, these features are also shown in Fig. 5, where input lead 134 and output lead 138 are displayed.

**Restriction of Claims:**

In regards to the restriction of the current claims, Applicant respectfully disagrees with the Examiner’s maintaining of the restriction and requests reconsideration thereof. In the Restriction Requirement of February 10, 2006, the Examiner stated that “the Application contains claims directed to five patentably distinct species.” The MPEP states that “species may be either independent or related under the particular disclosure.” *MPEP 806.04(b)*. In either case, a burden is placed on the Examiner to show that the species are in fact either independent, or related as

disclosed and distinct as claimed. If the Examiner claims that the species are independent inventions, he must show that they “are not connected in any of design, operation or effect under the disclosure.” *Id.* Alternatively, where there is a relationship disclosed between distinct species, “then the question of restriction must be determined by both the practice applicable to election of species and the practice applicable to other types of restrictions such as those covered in MPEP § 806.05 - § 806.05(j).” *Id.* In imposing the restriction, the Examiner failed to satisfy the burden of showing that the species are either independent or related as disclosed and distinct as claimed. That is, the Examiner failed to either show that the species were not connected in design, operation, or effect so as to show independent species, or alternatively, that the restriction was proper under both the practice applicable to election of species and the practice applicable to other types of restrictions so as to show distinct species. As the Examiner has failed to satisfy this burden under MPEP 804.04(b), the restriction is improper.

Also, as stated in MPEP §803, “Examiners must provide reasons and/or examples to support conclusions... to support the restriction requirement.” The Examiner’s statement that Figure 7 “does not disclose a printed circuit board includes [sic] two fingers for mounting the hall effect sensors and a conductive path includes [sic] at least one spiraled portion configured to encircle at least a portion of the pc board” is contrary to what is shown therein. *See Office Action, supra at 2.* Fig. 7 clearly shows a printed circuit board having two fingers for mounting the hall effect sensors and a conductive path having at least one spiraled portion configured to encircle a portion of the PC board.

Furthermore, as is disclosed in the current application, that shown in Figs. 5 and 7 is configured to include various systems and components as described with respect to Fig. 4. *See Application, p. 15 ¶66 and p. 17 ¶71.* The system shown in Fig. 4 is an integrated current sensing system, which includes that shown in Figs. 5 and 7. Thus, Fig. 4 is not a “different species” from Figs. 5 and 7 as characterized by the Examiner. As stated earlier, “[s]pecies are always the specifically different embodiments” of an invention. *MEPE 806.04(e).* As the Examiner has failed to show how Fig. 4, Fig. 5, and Fig. 7 are “specifically different embodiments”, the restriction requirement cannot be upheld and must be deemed improper.

In sum, the Examiner has not satisfied the burden to show restriction between the species of Groups A-E as required in MPEP 806.04(b). Additionally, Applicant believes that the alleged species are not “specifically different embodiments” as claimed by the Examiner.

In addition to the improper restriction, the Examiner also improperly limited the claims that read on the elected species. That is, while claims 1-13, 17-18, 20-35, and 38-39 read on the elected species, the Examiner improperly withdrew claims 1-13, 17-18, 20, 24-28, 32-35, and 38-39 from consideration. Therefore, in addition to the reasons set forth above in support of rejoinder of all claims, Applicant at least requests that the claims reading on the elected species identified above be examined.

**Rejection of Remaining Claims:**

The Examiner rejected claim 21 under 35 U.S.C. § 102(e) as being anticipated by Wan et al. Applicant respectfully disagrees with the Examiner’s interpretation of the prior art and what it discloses. Claim 21 calls for a conductive path disposed proximate to a PC board, the conductive path including at least one spiraled portion configured to encircle at least a portion of the PC board. Claim 21 further calls for, in part, a first Hall effect sensor and a second Hall effect sensor each configured to be mounted to the PC board and adjacent the conductive path, to provide feedback indicating a current flow through the conductive path. The Examiner asserts that the conductive path and the first and second Hall effect sensors called for in claim 21 correspond to the conductor 48 and the magnetic field sensors 10 of Wan et al., respectfully. The Examiner also asserts that, in Wan et al., “[i]t appears that the conductive path includes at least a conductor with at least one spiraled portion encircle [sic] at least a portion of the PC board (aperture or opening).” *Office Action, supra at 4.* Nowhere in Wan et al. is it disclosed that conductor 48 contains a spiraled portion. The Examiner asserts that “it appears that” the conductor contains a spiraled portion, but neither the written description nor the drawings of Wan et al. support such an inference. Figs. 3 and 4 only display a cross-sectional view of the conductor 48 and do not show a “spiraled portion” of conductor 48. Additionally, Wan et al. teaches that “[c]onductor 48 could be parallel to the PWB or could pass through the PWB.” *Col. 6, Ins. 21-22.* Wan et al. fails to teach or suggest the conductor 48 encircling a portion of a PC board.

Accordingly, that which is called for in claim 1 is not shown, disclosed, taught, or suggested in the art of record. As such, Applicant believes claim 1, and the claims which depend therefrom, are patentably distinct over the art of record. Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 21, 22-23, 29, and 31.

Applicant appreciates the Examiner's consideration of these Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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Dated: June 28, 2006  
Attorney Docket No.: ETC7455.066

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<sup>1</sup> The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.